



Figure 1. (SCISWA 2010)

# Moving CAN Inland for Dams

## Citizens' Action Network: A Best Practice Citizen Watch Organization and a Benchmark for Critical Infrastructure Protection *Inland*

Jay Graham King, CPP

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Abstract:

“See something, say something” is a slogan used by multiple federal and local law enforcement organizations to emphasize the need for citizen involvement in identifying and reporting crime or terrorism. Unlike these and other basic awareness campaigns, several U.S. Coast Guard districts use effective data capture and management to cultivate and maintain relationships with these volunteer observers through the Citizens' Action Network (CAN). With its Marina Outreach and Focused Lens programs, the USCG determines in advance people who are best positioned to observe incidents when they occur.

The CAN program enables the USCG to communicate with observers in real time during an incident, thereby; minimizing nuisance calls, economizing the use of enforcement and security personnel, equipping responders with accurate information when arriving at an incident scene, and offering investigators multiple known witnesses for post-incident inquiries.

“Grassroots” citizen engagement and the network it has created are the decisive components of this best practice watch program.

The CAN program enables an information advantage in Homeland Security and antiterrorism missions. The USCG has created a model on the coast that can be as successful to the U.S. Army Corps of Engineers and other Dams Sector members in enhancing domain awareness of the nation's critical infrastructure inland.

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*The views expressed herein are the author's only and do not necessarily represent the views of the U.S. Army Corps of Engineers, the U.S. Coast Guard (and Auxiliary), The George Washington University, Integrity Consulting or any other individual associated with the same. A version of this paper was first submitted in October 2010 by the author as coursework for The George Washington University's Safety and Security Leadership Master's Degree Program.*

## Moving CAN Inland for Dams

“It is reckless to leave the task of combating terrorism only to the professionals when the changing nature of the threat requires that ordinary Americans play a larger support role in detecting and preventing terrorist activities.”

Peter Bergen and Bruce Hoffman, *Assessing the Terrorist Threat*,  
A Report of the Bipartisan Policy Center's National Security  
Preparedness Group (2010)

Thousands of communities have neighborhood watch organizations, as many law enforcement organizations host suspicious activity reporting hotline numbers. The effectiveness of these programs varies measurably (Holloway 2008). One version of that has been adapted for Homeland Security missions has proved an enduring success. The U.S. Coast Guard's (USCG) Citizens' Action Network (CAN) is not yet nation-wide, but it has been recognized as a National Best Practice as far away as the Center for Homeland Defense and Security of the Naval Postgraduate School in Monterey, California, to the Homeland Security Institute in Arlington, Virginia (Billeaudeau 2007).

The USCG and the U.S. Army Corps of Engineers (USACE), as well as other Dams Sector partners, have similarly enormous areas of responsibility and limited personnel available to protect them. The effective citizen engagement and partnership critical to the CAN program are adaptable for Dams Sector members.

### ***Creating the Citizens' Action Network***

In the late 1990s, the USCG in the Puget Sound area experienced an increase in search and rescue activity due to a collateral effect of the technology boom in the Pacific Northwest. Many inexperienced boaters were purchasing their own watercraft and taking risks afloat for which they were unprepared (Billeaudeau 2007). The attendant proliferation of USCG operational activity often resulted in squandering of USCG assets and fatiguing Coast Guardsmen assigned to these missions (Billeaudeau 2007). For example, 98% of mariner distress flare calls are false alarms; many of these and other calls would require the USCG to conclude or re-prioritize ongoing, mandatory primary and secondary searches (Vigil 2009).

In 1999, Lieutenant Commander André Billeaudeau, then the USCG Group Operations Officer for the Seattle District, received a telephone call to the Group Command Center from a beachfront property owner who reported observing a distress flare (Vigil 2009). LCDR Billeaudeau recorded the information and captured the caller's contact information; but most significantly, he plotted the caller's location on the Command Center map and asked the caller if he could call him again in the future should a similar contingency emerge in the caller's line of sight (Vigil 2009). The first volunteer of the Citizens' Action Network was recruited.

## Moving CAN Inland for Dams

### ***CAN expands***

The program was variously called “Eyes on the Sound” and “Northwest Watch” before it was eventually branded “Citizens’ Action Network” (Garmire 2007). With the exception of a one-time \$50,000 grant from the Coast Guard Innovation Council, CAN has never had its own budget (Vigil 2009). Despite this, today there are over 550 members (including Canadian partners) of the Citizen Action Network in the Puget Sound-area alone (Vigil 2009). The CAN was also recently expanded to Coast Guard District 8, Division 4, which includes the Port of New Orleans, “most of south Louisiana and thousands of miles of waterway” (Diel 2009).

### ***How CAN works***

What began as a thumb tact on a Command Center map is now a computer network program accessible by multiple USCG Districts. The program’s graphic interface allows users to plot each of the 550 CAN volunteers on a diagram of the Puget Sound. A click of the dispatcher’s mouse on any plot point reveals the name and contact information of a CAN member. This allows the dispatcher to directly contact one or more CAN members who have known lines of sight, or a “strategic view” of an area where a maritime safety emergency or homeland security incident may be occurring. This initial alert contact with volunteers in a designated area can also be automated.

This allows the USCG to receive real time information about an emergent maritime hazard; or as significantly, to eliminate with certainty areas where there are no emergencies. The network of CAN volunteers helps the USCG to narrow its search sectors by confirming whether a hazard condition is occurring in their respective known areas of observation.

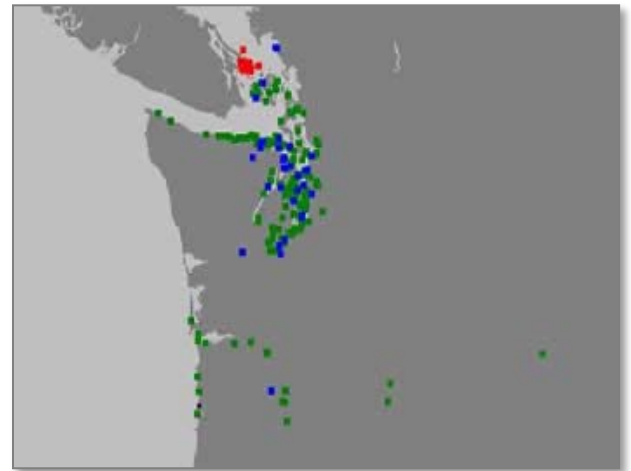


Figure 2. A scatter plot of CAN members in Puget Sound (Billeaudeau 2007, CAN 13th District 2010). Black icons represent business participants in CAN; Blue, Coast Guard Auxiliary members; Green, individual citizen CAN members; and Red icons are CAN Canadian partners (Vigil 2009).



Figure 3. Examples of “strategic views” from the homes of CAN Volunteers (PACNWEST 2010); (L-R) maritime commerce vessel, U.S. Navy Maritime prepositioning ship, and USCG vessel (photographer: Robert Lyden)

## **Moving CAN Inland for Dams**

The result is more efficient use of USCG resources, faster searches, reduced operational costs, and increased availability of USCG assets for homeland security patrols and other related missions (Vigil 2009).

### ***CAN near a dam***

In April 2007, the U.S. Coast Guard dispatched six search and rescue boats and a medical evacuation helicopter in response to a distress call concerning a vessel with three passengers aboard. The vessel was reportedly sinking near McNary Lock and Dam, a U.S. Army Corps of Engineers project on the Columbia River near Walla Walla, Washington (Sirocchi 2007). The call proved to be a hoax, but it was sufficient to encourage the local Coast Guard station in Kennewick, Washington to adopt CAN for its areas of operation along the Snake and Columbia Rivers. Recruiting CAN volunteers with riverfront views enabled Coast Guard leaders in Kennewick and Portland, Oregon to “make better decisions about when to dispatch rescue teams and in turn save money as well as lives” (Sirocchi 2007).

In addition to all inland navigable waterways that can be used to access the ocean, the USCG’s Area of Responsibility includes 95,000 miles of coastline (Taylor 2010). There are 45,000 Active Duty Coast Guard members (Taylor 2010); this amounts to one Coast Guardsman or woman per two miles of coastline (Vigil 2010). Programs like CAN represent a critical force multiplier for the USCG.

### ***When CAN worked***

Some CAN successes have included: the initial reporting and later destruction of a methamphetamine lab operation, photo identification of a poison canister washed ashore which enabled the appropriate Hazardous Materials response, preventing a group of illegal Chinese stowaways from entering the U.S., disruption of a waterborne hostage event, and the recovery of a vessel that was stolen due to gang activity and which led to subsequent arrests of the vessel thieves (Vigil 2009).

One noteworthy incident involved CAN volunteers with strategic views of the Tacoma Narrows Bridge providing real time information from different vantage points of the bridge superstructure before the Washington State Patrol or the USCG could respond to the scene of a bomb threat at the bridge (Vigil 2010).

### ***Who works CAN***

CAN volunteers tend to be older, many are in their 60s. Many older people may have additional time in retirement to participate in such civic activities, and many are in an income bracket which allows them to own waterfront property (Billeaudeau 2007). About 50% of CAN volunteers are former military members, but only 30% of CAN volunteers are active Coast Guard Auxiliary members (Vigil 2009). CAN members live or work along the coast; they have a vested interest in its security, safety and environmental protection. This population group represents natural pool of volunteers. Further, their daily close proximity to the coast enables them to

## Moving CAN Inland for Dams

discern better than many law enforcement or homeland security professionals what activities are normal or suspicious for that operating environment (Bussjaeger 2010).

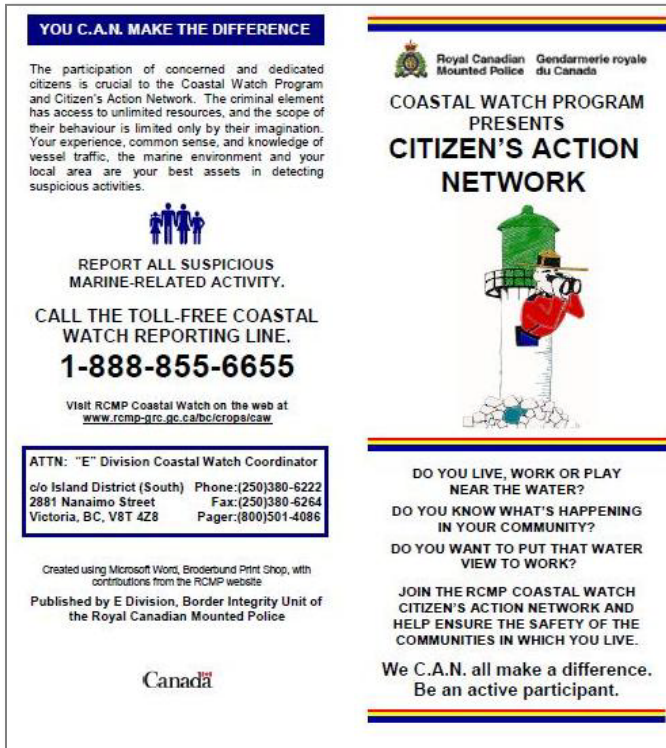


Figure 4. Royal Canadian Mounted Police CAN brochure (CAN 13th District 2010).

Active supporters and beneficiaries of CAN information sharing also include the USCG's inter-agency, law enforcement, and international security partners, such as: all Sheriffs' Departments in the Kitsap region, Washington State Patrol, Tribal governments, Customs and Border Protection, National Marine Fisheries Service, as well as environmentally focused non-governmental organizations such as Beach Watchers and People for the Puget Sound (Vigil 2009). The Royal Canadian Mounted Police, Canadian Coast Guard and the Canadian Border Services Agency (Vigil 2009) are among the USCG's Canadian partners in the network.

### **Why CAN works**

A hotline number for reporting suspicious information is common to nearly every jurisdiction. The CAN shares some characteristics in common with these types of programs, but the core ways in which it surpasses them are decisive.

- *Management support.*

In military or law enforcement organizations, the endeavors and enthusiasm of staff officers are not sustainable without the endorsement of the respective commanding officer. The CAN enjoys the endorsement of the USCG's 13th District Commander and the resources of the Group Operations Center, and Public Affairs Staff time (Vigil 2009).

- *Ease of use.*

CAN Volunteers are not expected pursue suspects, patrol waterways or to stand watch according to a certain schedule. They are expected only to call when they observe something incident to their normal activities, and to answer the phone (when home) if the USCG calls. Part of the above mentioned one-time \$50,000 grant was used to equip more active or more strategically located

## Moving CAN Inland for Dams

volunteers with binoculars, night vision goggles, and radios (Vigil 2009), but these only enhanced an existing pattern of reporting. Other volunteers use their own such equipment if they possess it. One CAN volunteer mounted a video camera at his own expense atop his home overlooking an adjacent waterway and granted USCG access to its wireless video feed (Vigil 2009).

- *Public relations.*

The task of publicizing CAN is not a collateral duty relegated to the Coast Guard's operational staff and enforcement personnel, but it is a priority of work for Coast Guard and Coast Guard Auxiliary Public Affairs Officers who have the requisite specialized training and resources to reach the public through the media. A variety of means are used to communicate the purpose of CAN and to solicit volunteers; including print media, local television news broadcasts (King5 2006), and social media such as Facebook (CAN Grp. 2010) and YouTube (Vigil 2009).

- *Advance identification and data capture.*

USCG does not wait for people to call when they observe an incident. It uses the Scatter Plot application in the Group Operations Center to identify the closest CAN volunteers or the volunteers with the best strategic views, accesses the contact information associated with Scatter Plot points, and then the Operations Center staff contacts them directly by phone. This process can also be automated in some emergencies (Billeaudeau 2007). The volunteers are asked to confirm or describe what they can see from their local vantage points.

Recognizing also that isolated, unlighted and unprotected marinas and boat launch areas can be used as staging areas by terrorists using small vessels (Wadleigh 2008); such locations are identified in advance and visited by USCG personnel. The least protected public access areas, boat ramps and marinas in a given USCG district are ranked based on their vulnerabilities or suitability for possible criminal or terrorist small vessel threats. These details are captured and ranked in a computer application supporting this operation called Focused Lens (Wadleigh 2008), a project separate from CAN.

The USCG Seattle District's Marina Outreach program involves USCG and USCG Auxiliary members visiting private marinas to acquaint boaters and marina operators with CAN and related programs (Hutchings 2010). Once the USCG identifies in advance of incidents, locations with "strategic views" or types of areas (marinas) where suspicious activities have been reported in the past; it initiates relationships with people who live and work in such areas and attempts to recruit them as CAN volunteer observers.

- *"Grassroots" citizen engagement and relationship maintenance.*

While advance vulnerable area identification, computer applications and updated contact lists are critical, these components are not decisive to CAN's success. It is the network behind CAN that is its center of gravity.

## Moving CAN Inland for Dams

Law enforcement and intelligence agencies or other government organizations and their employees are *not* the focus of the USCG's outreach efforts concerning CAN. The USCG seeks a dialogue with citizens directly. It is a "grassroots" strategy (Billeaudeau/NPGS 2007); expressed as "a localized, open, and inclusive engagement of civil society" (Flynn 2011).

Coast Guard organizers of CAN have recognized what is already intuitive to most community police officers who have successfully received a tip from the same citizen more than once. That is, where there is effort taken to cultivate and maintain a relationship with citizens, more information will likely be forthcoming (Billingsley 2009). Very often creating the impression that the citizen's information is useful and his contribution is valuable is all that is necessary for a citizen to invest the time or risk of sharing information in the future.

More than making hasty requests in times of emergency (or after the emergency has passed), the USCG has a sustained conversation with its CAN volunteers. CAN volunteers are granted access to shared websites, receive regular "CAN Grams" or "Auto Alerts" via e-mail, are issued CAN training manuals and materials, and receive invitations to Citizen Action Network conferences and related gatherings (Vigil 2009). With each engagement the USCG actively seeks citizen feedback and continued involvement. The USCG regards CAN volunteers as partners with a shared stake in the safety and security of local waterways. Through such relationship building the USCG's 13th District has established a "culture of vigilance" within its area of responsibility (Vigil 2009).

### ***A version of CAN that can do better***

Shortly after the terrorist attacks of September 11, 2001, the USCG created "America's Waterway Watch" (Turner 2010). Gradually, the appearance of the program became widespread and comparatively well capitalized. America's Waterway Watch featured the traditional hotline number (1-877-24WATCH) direct to the National Response Center (Turner 2010), promotional materials and a webpage, along with some well produced awareness videos. Many of these videos were also introduced by the USCG Commandant (AWW 2007). America's Waterway Watch is not without its successes.

In 2003, the Secretary of the Department of Homeland Security cited AWW in enabling a tour boat operator in New York to report suspicious activity which ultimately led to an arrest (Rowe 2008). What AWW lacks is not public relations or command support. It lacks a network.

The success of AWW depends on several factors: (1) an observer is in the area of suspicious incident, (2) the observer has a means of communication, (3) the observer can recall the ten digit AWW number in what may be a stressful situation, or the observer has had the foresight to program this number into a cell phone. In several ways, AWW is highly optimistic and inherently passive (Vigil 2009).

## Moving CAN Inland for Dams

In 2010, the DHS announced that an enhanced “America’s Waterway Watch 2.0” would include social media such as Facebook and Twitter for reporting, in addition to its hotline; thereby adapting a successful approach used by many other public safety organizations (Latonero 2010). The social media component of AWW 2.0 allows observers to send or “tweet” real time messages, photos or video of incidents in progress (Bussjaeger 2010).

This is a noteworthy improvement for AWW; however, just as the U.S. Geological Survey (USGS) found with its Twitter Earthquake Detection (TED) project (Hurst 2010), the 140 character limit may reduce the needed detail of some reports; and when “geotagging,” adding geographical metadata to electronic messages and media, is not enabled on wireless communication devices it reduces the utility of some messages (Hurst 2010). Additionally, having 3,000 “friends” on Facebook may not be as useful in an evolving crisis as three volunteers, identified in advance for their “strategic views” on the known vulnerable area which has become the scene of the emergency contingency. Whether a hotline number or a Facebook page, these are similarly passive approaches. It is still public safety agencies waiting for a call (or tweet), but possibly unable to reach out directly to those who are best positioned to immediately observe the scene.

The Citizens’ Action Network inverts this reporting process into an active system: (1) multiple likely observers with “strategic” vantage points are identified in advance by the USCG or Auxiliary, (2) these volunteer observers have redundant communication in the form of landline telephones and usually cell phones, as well as e-mail to receive targeted BOLOs or “Auto Alerts”, and (3) if the volunteer observer does not call because he or she is at that time not observing, the USCG can retrieve his or her contact information specifically and call the observer to confirm a report that may have come from another proximate source.

The efforts of the aforementioned New York tour boat operator are commendable; however, not mentioned in the DHS Secretary’s remarks was whether the tour boat operator’s contact information was captured and kept current, if his regular tour route and mooring points were plotted on a scatter plot to assess observer coverage of strategic waterways, or if continuous communication was maintained with this citizen who was willing to report suspicious activity. If these action steps were not taken, a useful source of information may be unavailable the next time he is needed.

### ***The Corps that CAN***

Like the USCG, the U.S. Army Corps of Engineers is a critical stakeholder in multiple (sometimes overlapping) Critical Infrastructure sectors, including the Dams Sector. The USACE maintains over 12,000 miles of inland waterways, operates over 600 dams and 195 navigation locks (IWR 2003). Fully 18% of all goods (over \$80 billion worth) transported in the United States, transit inland waterways which the USACE maintains, or the navigation locks that it operates (USACE 2009).

## Moving CAN Inland for Dams

Because of the “potential to cause massive downstream casualties and severe economic impact” Dams Sector assets represent likely targets of terrorism (Snapshot 2008); in response, the USACE has leveraged its Park Rangers in a watch program for many of these Corps projects.

In addition to civil works projects, the USACE is also the federal government’s largest outdoor recreation provider. Its Park Rangers are federal employees assigned to any one of 4,300 recreation areas, across over 460 waterways and lakes, in 43 states. This area includes over 12 million acres of land and water (Toman 2007). USACE Park Rangers receive periodic training in observing and reporting. Their training also includes an introduction to the components of the USACE’s CorpsWatch program. Based on a similar Bureau of Reclamation (BOR) program and poster campaign, the USACE’s CorpsWatch began with a pilot program in 2003 in the Pittsburgh District with only a \$100,000 budget (Toman 2007); eventually it was adopted across USACE.



Figure 5. A CorpsWatch poster posted at a Civil Works project (Pittsburgh District 2009)

CorpsWatch was originally designed to “reduce and deter property damage at Civil Works projects through the use of a national toll-free property protection hotline” (ER 2008), though its utility in reporting other suspicious activity is obvious. Anyone of the over 370 million people visiting USACE waterways and lakes each year (EU 2010) may also see a CorpsWatch poster, or view the same online at several USACE District websites. Once reported, information from Park Rangers or visitors to Corps projects is recorded in ENGLink, the USACE’s internal “mechanism for information and communication exchange and reporting”. Unlike the CAN’s direct citizen engagement, the emphasis of actual CorpsWatch training is USACE Park Rangers or other Corps employees (Toman 2007).

### **What could CAN do for dams?**

Like the USCG’s inability to observe 95,000 miles of coastline with its Active Duty personnel and Auxiliary, the USACE is little better equipped to observe with Park Rangers and other USACE employees, all of its critical infrastructure across 12 million acres of land and water.

While open source statistical information was not available concerning the extent of CorpsWatch hotline reports; as with CAN, and even with the offer of a \$1,000 reward, visitors to USACE projects may be as challenged to recall and use the USACE’s own ten-digit hotline number.

## Moving CAN Inland for Dams



Figures 6 and 7. Examples of strategic views from residences adjacent to hydropower infrastructure (Tinder 2003, above; Rt65 2008, below). Residents are able to observe and report, or to confirm the details of an event occurring if they are contacted .

Like the USCG, the USACE serves communities with a stake in the safety and security of inland waterways and Dams Sector assets. The USACE has the option to target its outreach efforts to these key residents, as the USCG does with its Marina Outreach Program and with Operation Focused Lens.

The USACE, BOR, Federal Emergency Management Agency (FEMA) and myriad other federal, state and county emergency planning organizations have for decades been mapping dam and levee inundations areas. Where homes are located in or near known inundation areas, and where these homes afford strategic views of dam and levee infrastructure, their residents represent an obvious and

interested pool of potential volunteers for a Citizen Action Network-type organization.

Local Civil Works project management or support staff, USACE District or Division security personnel, or USACE Park Rangers who have received CorpsWatch training might be initially employed in building the network of citizen observers from among these or similarly predisposed routine dam property users. Cooperation among local Coast Guard Auxiliary Flotillas and Dams Sector partners might also yield additional assistance in recruiting network volunteers. The USACE 24-hour Operations Center (USCG 2006) might be the appropriate forum for maintaining a “scatter plot” database of volunteer observers, capturing incoming emergency information, or requesting confirmation of information from other network volunteers, and sharing the same with civilian law enforcement partners (NRG 2001).

Where the USCG’s inland waterway security responsibilities overlap or subjoin USACE areas of responsibility for inland waterway maintenance or Dams Sector projects, there may be ample opportunities for resource and information sharing. Such inter-sector data sharing can also produce information useful to state and private Dams Sector members with fewer resources, but similar risk exposure.

## Moving CAN Inland for Dams

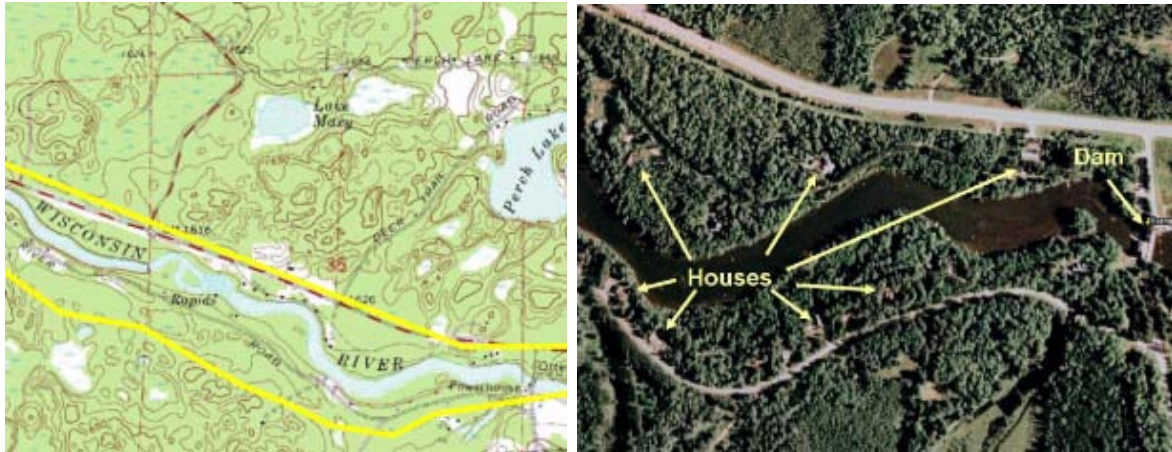


Figure 8. Mapped inundation areas between the yellow lines (left). A photograph of the same area (right) depicts multiple homes within this area; at least one appears to have a partial line of site, or a “strategic view” of this dam. Other homes upstream may also be able to observe this dam. Those homes without a view of the project have observation of avenues of approach to the same (Photo: ASDSO 2009)

### ***Could CAN compound concerns?***

Would soliciting volunteers for a CAN-type program cause greater public apprehension about living near dams which may be more exposed to specific risks? As Stephen Flynn of the Center for National Policy has expressed, policy makers and homeland security professionals often “believe that candor about potential dangers may generate excessive public fear. Yet the secrecy reflex often contributes to public anxiety. People are most frightened when they sense vulnerability to threats, but feel powerless to address them” (Flynn 2011).

Most people living in inundation areas near dams are already acquainted with their possible vulnerabilities in a general sense; many even have exaggerated conceptions of the same in the absence of accurate information. Additional candor concerning certain dam risks would likely be welcomed by these citizens. Engaging them in a CAN-type program also extends to citizens a method of being involved in helping to reduce vulnerabilities associated with the critical infrastructure asset in their backyard. It replaces a general sense of fear with a greater sense of control; and possibly even with a sense of shared investment in the safety and security of the local infrastructure asset.

### ***Conclusion***

Neighborhood watch-type programs will proliferate and law enforcement agencies will continue to inform citizens that if they “see something” they should “say something”. However, law enforcement and security professionals who build relationships with citizens directly, and who implement systems that enable sustained and effective communication with them will have the information advantage in Homeland Security and antiterrorism missions. The USCG has created a model on the coast that can be as useful to USACE in enhancing domain awareness of the nation’s critical infrastructure inland.

## Moving CAN Inland for Dams

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The views expressed in this paper are the author's only and do not necessarily represent the views of the U.S. Army Corps of Engineers, U.S. Coast Guard, U.S. Coast Guard Auxiliary, The George Washington University, Integrity Consulting or any other individual associated with the same.

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## Moving CAN Inland for Dams

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